



translation

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference JBS-38-PCT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP2003/009096	International filing date (day/month/year) 17 July 2003 (17.07.2003)	Priority date (day/month/year) 30 July 2002 (30.07.2002)
International Patent Classification (IPC) or national classification and IPC C23C 14/34, C04B 35/56		
Applicant BRIDGESTONE CORPORATION		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 1 sheets.

3. This report contains indications relating to the following items:

- I  Basis of the report
- II  Priority
- III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain documents cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

Date of submission of the demand 19 December 2003 (19.12.2003)	Date of completion of this report 25 August 2004 (25.08.2004)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International Application No.

PCT/JP2003/009096

## I. Basis of the report

1. With regard to the elements of the international application:<sup>\*</sup> the international application as originally filed the description:

pages \_\_\_\_\_, 1-16, as originally filed

pages \_\_\_\_\_, filed with the demand

pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

 the claims:

pages \_\_\_\_\_, 1-4, as originally filed

pages \_\_\_\_\_, as amended (together with any statement under Article 19)

pages \_\_\_\_\_, filed with the demand

pages \_\_\_\_\_, 5-7, filed with the letter of 08 June 2004 (08.06.2004)

 the drawings:

pages \_\_\_\_\_, as originally filed

pages \_\_\_\_\_, filed with the demand

pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

 the sequence listing part of the description:

pages \_\_\_\_\_, as originally filed

pages \_\_\_\_\_, filed with the demand

pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

 the language of a translation furnished for the purposes of international search (under Rule 23.1(b)). the language of publication of the international application (under Rule 48.3(b)). the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

 contained in the international application in written form. filed together with the international application in computer readable form. furnished subsequently to this Authority in written form. furnished subsequently to this Authority in computer readable form. The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished. The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.4.  The amendments have resulted in the cancellation of: the description, pages \_\_\_\_\_ the claims, Nos. \_\_\_\_\_ the drawings, sheets/fig \_\_\_\_\_5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).<sup>\*\*</sup>

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1 - 7	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1 - 7	NO
Industrial applicability (IA)	Claims	1 - 7	YES
	Claims		NO

2. Citations and explanations

- Document 1: US 6217969 B1 (Bridgestone Corp.), 17 April 2001, column 1, lines 5-12; column 2, lines 23-31; column 3, lines 57-60; column 4, lines 34-40; table 2 and claims
- Document 2: JP 5-339057 A (Bridgestone Corp.), 21 December 1993, claims and paragraph 14
- Document 3: JP 2-111663 A (Eagle Kogyo Co., Ltd.), 24 April 1990, claims and examples
- Document 4: JP 60-80295 A (Sumitomo Electric Ind., Ltd.), 08 May 1985, claims and page 2, lower left column, lines 2-5

The inventions that are set forth in claims 1-7 do not involve an inventive step in the light of document 1 and documents 2-4 cited in the international search report.

It would be easy for a person skilled in the art to apply the feature of forming a sintered body from silicon carbide and silicon by means of a reaction sintering method, which is disclosed in documents 2-4, when forming a silicon carbide sputtering target using a highly pure substance that comprises 5ppm or less of impurities as the silicon source, as disclosed in document 1.

In addition, document 1 discloses the feature of

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using two types of silicon carbide powder with different peaks in the distribution of particle sizes in order to improve the packing density of the pulverulent body and the like; therefore, a person skilled in the art could delimit an average particle diameter of 1.7-2.7 $\mu\text{m}$  and an average particle diameter of 10.5-21.5 $\mu\text{m}$  respectively for each of the powders that are mixed for use as the silicon carbide powder, as appropriate, on the basis of experimentation.